

upward, the large-diameter contact hole can have a reduced aspect ratio (height to bottom diameter of contact hole), with the result that coverage of the wiring conductor layer deposited on the insulator film to fill up the large-diameter contact hole is improved. Therefore, the subsequently deposited wiring conductor layer is prevented from disconnecting at the bottom of the hole defined by the sidewall. As a result, even if the interlayer insulator film becomes thick because of the advanced high integrated density and highly fine patterning of the semiconductor integrated circuit, the wiring conductor layer deposited within the large-diameter contact hole is difficult to disconnect.

In addition, since the small-diameter contact hole also has the funnel-shaped portion, the small-diameter contact hole can have a reduced aspect ratio. Therefore, when a refractory conductive material is deposited to fill up the small-diameter contact hole, "voids" becomes difficult to occur within the plug formed of the refractory conductive material filled up in the small-diameter contact hole, so that the contact resistance of the plug formed in the small-diameter contact hole can be improved.

The above mentioned features of the claimed invention are neither disclosed nor suggested by any of the cited references.

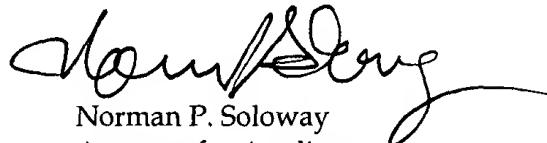
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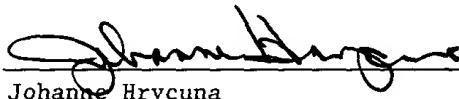


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